Cover Stories:

Major Scientific Publications Featuring NRI-funded Research

Knowledge For Tomorrow's Solutions

United States Department of Agriculture

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Ioannis Bossis and Tom E. Porter, Department of Animal and Avian Sciences, University of Maryland, College Park, MD. 2000. Ontogeny of Corticosterone-Inducible Growth Hormone-Secreting Cells during Chick Embryonic Development ***Endocrinology*** *141 (7):* 2683-2690

Efficient growth in chickens is controlled in part by pituitary growth hormone, a product of the anterior pituitary gland. Using NRI funding, Dr. Porter and colleagues have shown that the adrenal glucocorticoid, corticosterone, is the body's signal that initiates differentiation of cells that can produce growth hormone during normal embryonic development. Porter has also shown that treatment of developing chicken embryos with low levels of corticosterone can induce premature growth hormone gene expression and differentiation of growth hormone producing cells. This research has provided us with a better understanding of the mechanisms controlling normal production of growth hormone. A better understanding of how glucocorticoids regulate growth hormone secretion may lead to new methods for improving nutrient utilization and growth performance in poultry.

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